



GP/3763

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner: Anh Tuan Nguyen

TC 3700 MAIL ROOM

JAN 29 2001

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TRANSMITTAL OF WORK MEMORANDA REQUESTED BY EXAMINEE

Commissioner for Patents  
United States Patent and Trademark Office  
Washington, D.C. 20231

Sir:

The undersigned wishes to thank the Examiner for the time and attention given thereby to the above-referenced application in an interview conducted at the request of the Examiner in the United States Patent and Trademark Office on January 22, 2001. The matters discussed in the interview are set forth in an Interview Summary identified in the file wrapper as Paper No. 6 that was prepared by the Examiner and provided to the undersigned at the conclusion of the interview.

As a result of comments made by the Examiner during the interview, it became apparent that providing copies of certain organizing memoranda relative to the several embodiments of the technology disclosed in the above-captioned application could prove useful to the Examiner

immediately and throughout the course of prosecution. The offer to provide such memoranda was tendered in the interview and accepted by the Examiner.

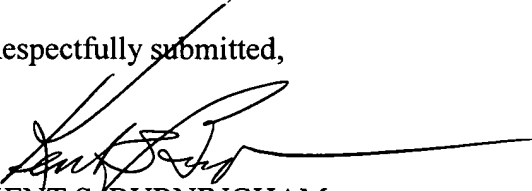
Accordingly, transmitted herewith are copies of the following:

1. Memorandum dated January 23, 2001, presenting a typology of the disclosed embodiments; and
2. Memorandum dated January 24, 2001, correlating the embodiments in the above-listed Memorandum to the figures of the above-captioned application.

If the undersigned can be of further assistance, the Examiner is encouraged to initiate telephone contact therewith at either of the numbers listed at the signature line below.

DATED this 24<sup>th</sup> day of January, 2001.

Respectfully submitted,



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Docket: 2408.3775US

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DATED this 24<sup>th</sup> day of January, 2001

Respectfully submitted,



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Transmitted: Transmittal for Work Memoranda Requested by Examiner (2 pages)  
Memorandum of 1/23/01 (3 pages)  
Memorandum of 1/24/01 (1 page)  
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# MEMORANDUM



TO: File No. 2408.3775US

FROM: Kent S. Burningham

DATE: January 24, 2001

SUBJECT: USSN 09/542,503 – Correlation of Figures to Embodiments

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The table below correlates the figures of United States Patent Application Serial No. 09/542,503 with the embodiments of the Subject Technology identified in the Memorandum of January 23, 2001

FIGURES	EMBODIMENTS																			
	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	B1	B2	B3	B4	B5	B6	B7	B8	C1	C2
1-12	x																			
13-15		x																		
16-18									x											
19			x																	
20-26C				x																
27-28					x															
29							x*	x												
30-31						x	x*													
32									x	x										
33-37											x									
38											x					x				
39-41												x								
42-44													x							
45-47														x						
48														x		x				
49-50															x					
51															x	x				
52-53																	x			
54-58																		x		
59-60																			x	
61-62																				x

\*Embodiment A7, though not literally depicted in any one figure, is a composite of features shown in Figures 29-31.

MEMORANDUM

TO: File No. 2408.3775US  
FROM: Kent S. Burningham  
DATE: January 23, 2001  
SUBJECT: USSN 09/542,503 -- Disclosed Embodiments



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The catheter tip slit valve technology disclosed in United States Patent Application Serial 09/542,503 (hereinafter "the Subject Technology") finds tangible expression in a plurality of disclosed embodiments. These embodiments have been arranged into a typology and assigned embodiment identification designations.

The structure and the contents of the typology for the Subject Technology is set forth below, without regard to whether each corresponding embodiment structure is disclosed in the patent application in the context of a close-ended conduit comprising a catheter tube and a terminal end wall, or in the context of a hollow distal extension for a catheter tube with a terminal end wall.

A. Single Lumen Catheter Embodiments:

Embodiment A1: a) plane of end wall is perpendicular to axis of catheter, and  
b) end wall is flat.

Embodiment A2: a) plane of end wall is perpendicular to axis of catheter, and  
b) end wall is convex.

Embodiment A3: a) plane of end wall is perpendicular to axis of catheter,  
b) end wall is convex, and  
c) tubing wall is thinnest at end wall.

Embodiment A4: a) plane of end wall is perpendicular to axis of catheter,  
b) end wall is flat, and  
c) tubing wall is thinnest at end wall.

Embodiment A5: a) plane of end wall is not perpendicular to axis of catheter, and  
b) end wall is flat.

Embodiment A6: a) plane of end wall is not perpendicular to axis of catheter, and  
b) end wall is convex.

(continued)

A. Single Lumen Catheter Embodiments (*continued*)

Embodiment A7: a) plane of end wall is not perpendicular to axis of catheter,  
b) end wall is convex, and  
c) tubing wall is thinnest at end wall.

Embodiment A8: a) plane of end wall is not perpendicular to axis of catheter,  
b) end wall is flat, and  
c) tubing wall is thinnest at end wall.

Embodiment A9: a) plane of end wall is perpendicular to axis of catheter,  
b) end wall is semispherical, and  
c) interior of end wall is conical.

Embodiment A10: Any of embodiments A1-A9 having a valve in the end wall comprised of a plurality of intersecting slits that separate three or more moveable valve walls.

B. Dual (semicircular) Lumen Catheter Embodiments:

Embodiment B1: a) single end wall,  
b) plane of end wall is perpendicular to axis of catheter, and  
c) end wall is flat.

Embodiment B2: a) single end wall,  
b) plane of end wall is perpendicular to axis of catheter,  
c) end wall is flat, and  
d) tubing wall is thinnest at end wall.

Embodiment B3: a) single end wall,  
b) plane of end wall not perpendicular to axis of catheter, and  
c) end wall is flat.

Embodiment B4: a) single end wall,  
b) plane of end wall is not perpendicular to catheter axis,  
c) end wall is flat, and  
d) tubing wall is thinnest at end wall.

Embodiment B5: a) first and second end walls terminate respective lumens,  
(Peaked Roof) b) planes of each respective end wall intersect septum in a common line that is perpendicular to axis of catheter,  
c) planes of each of first and second end walls are not perpendicular to axis of catheter, and  
d) each end wall is flat.

(*continued*)

B. Dual (semicircular) Lumen Catheter Embodiments (*continued*)

Embodiment B6: Any of embodiments B1-B5 having a valve in the end wall rotated out of an orientation that is parallel to the septum.

Embodiment B7:  
(Mansard Roof)

- a) first and second end walls terminate respective lumens,
- b) planes of each respective end wall intersect septum in a line perpendicular to axis of catheter,
- c) plane of first end wall is perpendicular to axis of catheter, but plane of second wall is not perpendicular to axis of catheter, and
- d) each end wall is flat.

Embodiment B8:  
(Staggered Tip)

- a) first and second end walls terminate respective lumens,
- b) planes of each respective end wall intersect septum in distinct parallel lines that are perpendicular to axis of catheter, and
- c) each end wall is flat.

C. Triple Lumen Catheter Embodiments:

Embodiment C1:

- a) circular lumen surrounded by a pair of C-shaped lumens,
- b) single end wall closes C-shaped lumens only,
- c) plane of end wall is perpendicular to axis of catheter, and
- d) end wall is flat.

Embodiment C2:

- a) semicircular lumen and a pair of quarter circle lumens,
- b) first end wall terminates semicircular lumen, but a single second end wall terminates both quarter circle lumens,
- c) planes of each respective end wall intersect septum in a common line that is perpendicular to axis of catheter,
- d) first end wall is perpendicular to axis of catheter, but second end wall is not perpendicular to axis of catheter, and
- d) each wall is flat.